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LEARNING TO THINK LIKE A NURSE: THE PERCEPTIONS OF NEW NURSE GRADUATES

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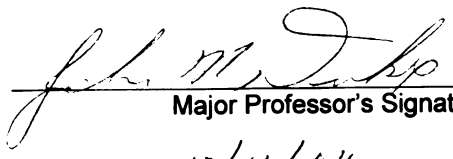

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LEARNING TO THINK LIKE A NURSE: PERCEPTIONS OF NEW NURSE GRADUATES

By

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ABSTRACT

LEARNING TO THINK LIKE A NURSE: PERCEPTIONS OF NEW NURSE GRADUATES

By

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In current health care settings, nurses are expected to make clinical judgments for the welfare of the patients. One aim of nursing education is to help students learn to be beginning practitioners, which includes making clinical judgments that ensure patient safety. Clinical judgments often determine how quickly a life threatening complication is detected, how soon people leave the hospital, or learn to take care of themselves. However, current research shows that students do not perform well at the task of making clinical judgments. This occurs despite the fact that students have graduated from accredited schools of nursing and have passed the NCLEX (state board test) exam.

This descriptive qualitative study examined the perceptions of nursing graduates about learning to make clinical judgments. Over a period of nine months, and on three different occasions, BSN graduates were interviewed to determine their perceptions of learning to 'think like a nurse'.

The themes found in the interviews with both the new graduates and the preceptors were similar. Self –authorship was the over arching theme and is composed of confidence, responsibility, relationship to 'the other', thinking critically about work, and

experiences. In addition, the learning strategies the new graduates perceived were and were not helpful are identified. In addition, the new graduates had difficulty identifying priority problems and interventions in a case study.

The results of the study will be helpful in identifying learning strategies to assist nursing students and new graduates to be successful in learning think like a nurse.

Dedicated to
Dorothy Zylstra Sheler
for her untiring support while I completed this project.

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Chapter 1

Introduction

A new graduate, several months after beginning work as a registered nurse, shared how it felt to begin work in her chosen profession:

> The biggest surprise about nursing is the fact that I am just overwhelmed at the fact that I am responsible for the care (and the lives) of seven people every night and I am only 22 years old! I always get all stressed at the beginning of shift getting all the meds and assessments done. I am on my own and ask tons of questions—nursing decisions call for all sorts of questions. I don't have the experience to back up anything. (Dyksterhouse, personal communication, April 2001)

Among the questions raised for nurse educators and the profession in general, include: Why is she so stressed? Was she unprepared for her role of making clinical nursing judgments?

Rapid changes in the organization and management of health care are having a dramatic impact on nursing care and the education of nurses. Shorter hospital stays and changing requirements for admission, mandated by increasingly cost-conscious insurance companies and health maintenance organizations, are resulting in hospitalized patients who are more ill and present with conditions that are more complex. These patients are placing new demands on nurses who are required to make clinical nursing judgments as part of nursing care.

Some studies, however, show that new nursing graduates are not able to demonstrate the level of nursing decision required by these emerging clinical situations. (del Bueno, 1990b; Huizenga, personal communication, Aug. 21, 1994). In addition, relatively little is known about how widespread this nurse's perceptions are among new

graduates about their abilities to make clinical nursing judgments. Given the recent dramatic changes in medical and health care, her experience raises serious questions about how confident new nurse graduates feel about addressing the challenges facing them. The purpose of this study is to explore recent nursing graduates' perceptions regarding experiences in which they learned to make clinical nursing judgments.

Background to the Problem

A major goal of current nursing education is that the beginning practitioner of nursing be able to make sound clinical nursing judgments (Ironside, 2001). Upon graduation from an accredited nursing program it is expected that the nurse will be able to identify information regarding the patient's health status; when that status changes, what needs to be accomplished to maintain a positive (patient health) status, or ameliorate a deteriorating (patient health) status, and how to prioritize the needs of the patient in either of the above situations. Maintenance of the physiological and psychological integrity of the patient often is dependent upon the nurse's ability to make accurate and timely clinical nursing judgments.

In the past, nurses had the luxury of developing this ability gradually. Patients stayed longer, were less ill, and nursing care involved less complicated technologies. The nurse was assigned to patients with a range of medical diagnoses in a less tense environment. Recent changes in the nature of health care have made for a more intense environment. Increases in technology, insurance companies, and HMOs are demanding shorter hospitalization stays and placing more emphasis on outpatient treatments are some of the changes. As a result, the patients are often more ill and present with problems that are more complex and require rapid, accurate nursing decisions (Adams, 1999;

Angel, Duffey, & Belyea, 2000; Di Vito-Thomas, 2000; May, Edell, Butell, Doughty, & Langford, 1999).

Given these changes, newly employed nurses are required to develop and demonstrate effectiveness in making clinical nursing judgments in a shorter period. Gone is the luxury of developing these skills in a less intense and hectic environment. Concern for the development of these clinical nursing judgment making skills is becoming manifest in studies of nurse graduates. Recent studies clearly suggest that new nursing graduates have difficulty making clinical nursing judgments. In a study of 400 nursing graduates del Bueno (1990b) found that many are unable to demonstrate acceptable entry-level nursing decision making abilities. When presented with a variety of clinical simulations on videotape, many entry-level nurses could not make accurate judgments, despite graduating from an accredited school of nursing (Limandri & Tilden, 1996; Sietsema, 1992).

Possible Reasons for the Problem

There are several reasons that might explain this disturbing set of findings.

Education level

For example, one might suggest that the educational programs from which nurse's graduate might not be developing adequate skill in making clinical nursing judgments. Although nurses are educated via different types of educational programs that vary in the length of educational process (two years, three years, or four years), there is no evidence that suggests that any one program is more successful in teaching graduates to make clinical nursing judgments (Sietsema, 1992). Viewing video simulations about patient situations, many of the subjects in the research missed the major problems such as

identifying emerging postoperative complications, dropping blood sugar, and acute renal failure. Graduation from any of the three types of nursing programs was not correlated with the ability to make clinical nursing judgments.

Age

Another possible explanation is the age of the graduating nurse. It might be hypothesized that younger graduates may not have the maturity level necessary to develop effective clinical nursing judgments. Both del Bueno (1990b) and Sietsema (1992) compared the ages of the subjects with their ability to make clinical nursing judgments and critical thinking edibility. Chronological age did not appear to show any correlation with the ability to make clinical nursing judgments. The samples in both research studies included individuals ranging in age from 21 years to 52 years. The age of the graduate appears to be noncontributory to the ability to make clinical nursing judgments.

Content knowledge

Lack of sufficient content knowledge is another reason that might be considered in helping one to understand this lack of ability among new nursing graduates to make effective clinical nursing judgments. State boards of nursing give general direction to programs for didactic instruction (Michigan Board of Nursing, 2001). Theoretical knowledge as a basis for making clinical nursing judgments has been given major consideration in schools of nursing. The knowledge base that the student is developing includes the cause, symptomotology, and use of pharmacological agents, coping of the patient/family and rehabilitation as it relates to a specific disease entity. Much of this knowledge is explicit and cannot be verbalized (Tiggs & Titchen, 1995). Chowlowski

and Chan (1995) found that content knowledge alone did not improve the ability to make good clinical nursing judgments. She found that logical reasoning, the ability to process information, as well as well-structured schemas helped to improve the ability to make clinical nursing judgments, while Beelen (personal communication Nov 23, 1999) suggests that experiential learning is most helpful for making clinical nursing judgments. With a major explosion of knowledge in the health care domain, other types of knowledge need to be enhanced and examined (Crow, Chase, & Lamond, 1995).

Clinical experience

Several years ago, state boards of nursing precisely prescribed specific numbers of hours in clinical settings (Michigan Board of Nursing, 2001). That is each student needed a specific number of hours in maternal child nursing, in mental health nursing, and medical- surgical nursing. However, most boards of nursing now give each school of nursing the latitude to make the judgment for how much clinical experience is necessary. All educational institutions are expected to make sure that the clinical experiences are sufficient for students to be successful as new graduates. Thus, each individual nursing program decides the number of hours of clinical experience in the nursing program. There may be considerable variance between programs (Michigan Board of Nursing, 2001).

Clinical reasoning

At this time, the ability to make good clinical nursing judgments has not been correlated with the nature of educational programs, age of the students, and nursing knowledge. The nature of the nursing clinical judgment making process needs to be considered more carefully. Making nursing clinical judgments is a complex reasoning

process. A variety of perspectives, evaluation of evidence, and the ability to draw conclusions from evidence are involved. Nursing accreditation agencies have mandated that critical thinking be evaluated as an outcome for graduation because of the difficulty in making nursing clinical judgments. Nursing educators have focused on critical thinking and measuring critical thinking outcomes (American Association of Colleges of Nursing, 1999). The implication is that critical thinking and making a clinical nursing judgment are similar. Yet, research in this area suggests that making clinical nursing judgments and critical thinking is not the same thing, nor does nursing education enhance critical thinking (Adams, 1999).

The clinical judgment

One area of research that has not received extensive attention is the nursing clinical judgment itself. Clinical nursing judgments, generally, are ill structured in that the presenting problem does not necessarily have a single cause or single conclusion. For example, what may appear to be simple nausea may be the result of response to anesthesia, chemotherapy, or an obstructed intestine. The nurse also makes nursing clinical judgments regarding the patient's psychosocial status and ability to carry out the activities of daily living. Thus, it seems reasonable to consider the epistemological demands placed on clinicians by the nursing decision process.

Epistemological development

An area that may have an impact upon the ability to make clinical nursing judgments may be the epistemological development of the individual. One of the ways in which thinking about epistemology has been explored is from a developmental perspective. Epistemological development is part of intellectual and moral development

and is concerned with the individual's belief about knowledge (Baxter Magolda, 1992; Belenky, Clinchy, Goldberger, & Tarule, 1986; King & Baxter Magolda, 1996). Theorists provide strong evidence of developmental movement and change in college students' epistemic beliefs. The move toward more complex intellectual abilities appears to proceed sequentially and at varying rates along a continuum (Baxter Magolda, 1992; King, 1994; Perry, 1970).

This developmental research suggests that, at graduation, the epistemological development of most college students remains at a low level (stage 2 of 4) (Baxter Magolda, 1992; King & Kitchner, 1994). In addition, Frish (1987) and Valiga (1983) found that nursing graduates were at the same stage of development as other college graduates. That is, at graduation the students were at stage 2 (out of 4). This means the students apparently did not have the knowledge or ability to make clinical nursing judgments.

When applied to the understanding about clinical nursing judgments in nursing, these findings raise troubling questions and concerns. The concern is that the epistemological demands are beyond what the new nursing graduate believes he/she is capable of meeting. For example, in a small pilot study, Etheridge (1999) learned that nursing students were surprised greatly by the number and kind of clinical nursing judgments required of nurses. They began nursing education with the idea that doctors would direct their actions and following graduation they seem overwhelmed with the clinical nursing judgments they are required to make. This seems to indicate a lack of understanding of their role as a nurse in making clinical nursing judgments, in the process of judgment making, and perhaps in the volume of knowledge needed to make clinical

nursing judgments. Thus, it is possible that many nursing students/graduates may not have accurate perceptions of the demand being placed on them for making clinical nursing judgments.

Entrants into other professional fields also experience similar problems. They are not experts and learn as they gain experiences. Part of the concern is that they have not developed a professional self-identity or a complete sense of themselves as the professional they are educated to be. That is, they have not completely integrated a sense of professional self-identity. The more one works or has experiences in the profession, the more one learns to be the professional person (Costello, 2004; Etheridge, 1996; Kunda, 1992).

Some physicians began practice not knowing what their responsibilities were or even how to perform some simple basic skills like drawing blood (Ofri, 2003). In addition, all the skills and thinking were learned in very stressful situations. Surgeons', as a group, believed in practice, not talent. Attending surgeons' say that what is most important to them is finding people who are conscientious, industrious, and stubborn enough to stick at practicing this one difficult thing day and night for years on end. As one professor of surgery said about choosing who would be the best surgical candidate, he'd pick the PhD every time because he'd bet on the sculptor being more physically talented; but he'd bet on the PhD being less 'flaky', and that in the end matters most. Skill can be taught; tenacity cannot (Gawande, 2002 p.18).

Despite the similarity of these problems in other professions with the field of nursing, the issues for nursing are distinctive. In nursing, the problems for learning in the profession have some distinctive issues. The majority of the entrants are female while the

medical profession is male, and the medical profession has historically dominated the nursing profession. Most entrants into nursing education do so after completion of the college education while many other professions continue with postgraduate education. The nursing profession is just beginning to identify its' own area for expertise that is separate from but collaborative with medicine. In addition, the nurse has a great deal of responsibility to identify problems, but often very little authority to prescribe the treatment of a problem. That is a nurse might identify chest pain as potentially a heart attack, but is not able to prescribe the treatment for the problem. The nurse may follow protocols during the lapse of time between the onset of symptoms and the arrival of the physician. The interventions might be to start an IV, start oxygen, and order an electrocardiogram and blood studies. But it is the doctor that diagnoses the problem and prescribes the treatment such as the specific medications or other technological interventions.

The professional identity of nurses changes as they acquire more experience (Cook, Gilmer, & Bess, 2003). There are multiple small details of identity that change after graduation and entrance into the profession. The individual exchanges the student uniform for that of a staff nurse. The official title with the signature, on charts, changes from that of SN (student nurse) to that of RN (registered nurse). Handling telephone orders are legally within the realm of the new nurse while they were not as students. The professional identity continues to change as the new nursing graduate moves from being a student to that of the professional nurse.

Part of the reason for these issues is that nursing education has not kept pace with the pace of health care reform. Many nursing faculties are still teaching the way they

taught 15 years ago. Many are not in the clinical settings observing the changes that are happening in health care but rather spend most of their time in the classroom and in research.

In addition, some nursing educators have not changed from a paradigm of teaching to that of learning. Many still lecture, rather than facilitate learning. They lack an awareness of cognitive developments that are necessary for becoming a capable practitioner in the profession. In addition, the complexity of health care is changing and therefore the requirements of nursing graduates are changing (Didham, 2004).

From the nursing literature, how students learn to make clinical nursing judgments is "clearly not understood" (Bowles, 2000; Grealish, 2000). In addition, there is almost no information in the nursing research literature that addressed the students' perceptions and beliefs regarding their role in making clinical nursing judgments, or what they found to be helpful in learning how to make clinical nursing judgments. Questions include: is length of time, or actual hours in the clinical setting important, is providing actual care helpful, what type, or amount of written assignments helps the learner, how important is the actual context in learning to make clinical nursing judgments, what learning activities in the actual clinical experiences were most helpful? Alternatively, do these graduates perceive that clinical nursing judgments are essentially based on what they learned in theory?

Research Questions

This research addresses the following question: What are the perceptions of new nursing graduates about clinical nursing judgments and the education involved in learning how to make clinical nursing judgments? In addressing this question, this

research would also explore experiences the new graduates consider helpful in learning to make clinical nursing judgments as well as beliefs regarding their role in making clinical nursing judgments.

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Chapter 2

Review of the literature

One aim of nursing education is to help students to become beginning practitioners in nursing who are capable of making clinical nursing judgments that ensure patient safety. Clinical nursing judgments often determine how quickly a life threatening complication is detected, how soon people leave the hospital, or how quickly the patient learns to take care of themselves out side the hospital. Often the clinical nursing judgments of the nurse maintain the physiological integrity of the patient. Therefore, it is important that decisions be timely and accurate.

Unfortunately, recent research suggests that new graduates are not successful in making clinical nursing judgments. Both del Bueno (1990a) and Sietsema (1992) used short video scenarios to test the individual's ability to make clinical nursing judgments. del Bueno (1990b) has assessed hundreds of graduates' ability to make clinical nursing judgments. Multiple sites were used, as well as graduates from the three types of nursing education programs. Using the same video scenarios, the outcome appeared to be the same; recent nursing graduates were unable to make clinical nursing judgments. In replicating the study, Sietsema (1992) used a smaller sample of senior nursing students. The findings were the same. Currently there is still concern regarding the new graduate's ability to make clinical nursing judgments (Huizenga, personal communication, 2003).

Furthermore, in a meta-analysis of the literature the results are mixed. At times, there appeared to be a positive correlation between critical thinking and making clinical nursing judgments and at other times, there appeared to be no correlation. Therefore at

this time, there does not appear to be any definitive findings identified to assist educators in preparing students to make clinical nursing judgments with the hope that improvement in making clinical judgments could be cited (Kintgen-Andrews, 1991).

In the past, with less complexity in the health care setting, the nurse learned to make judgments after graduation. There was time to further refine the skills of making clinical nursing judgments. In addition, there were more nurses available to mentor the graduates. That has changed. Currently, health care institutions are reluctant to spend time and money having experienced nurses precept new nursing graduates (Tobin, 2002).

There are many possibilities why new nursing graduates have difficulty making clinical nursing judgments. The type of educational program, age, theoretical knowledge, clinical experience, complex clinical environment, and epistemological development are some of the possible reasons for the difficulty.

Similar issues are found in other professions. Teachers learn to teach primarily in the class room, and doctors learn to make judgments primarily in the context of their work (Gawande, 2002). Professional identity takes time to develop and develops best in the context the professional practice.

Students learn nursing in the college classroom, in laboratory and in the clinical setting. In the classroom, the students learn the facts of nursing and some problem solving. In the laboratory the students learns and practices specific psychomotor skills, while in the actual clinical setting the student actually takes care of patients. However, that care is shared with the faculty and with the staff nurse, which means there is a complex legal accountability for the care of the patient.

Making clinical judgments for nurses is distinct from learning that others might accomplish in their professional development. In nursing, the individuals are primarily female, many are first time college graduates, and they work in an environment in which they have a lot of responsibility but limited authority to prescribe or treat the problems they identify. That is they are accountable for identifying problems, but some of those problems need a medical order to ameliorate the problem. Therefore, the nurse needs to validate the problem and obtain the required orders to treat the problem.

Making clinical nursing judgments

When looking at the concept of making clinical nursing judgments, both the nursing decision itself and the process involved in making the nursing clinical judgments should be examined. Therefore, the clinical nursing judgments will be described followed by a discussion of the process involved in making clinical nursing judgments.

Clinical nursing judgments, generally, are ill structured in that the patient's presenting problem does not necessarily have a single cause or single conclusion. For example, what may appear to be simple nausea may be the result of response to anesthesia, chemotherapy, or an obstructed intestine. In addition to addressing physiological changes, the nurse also makes nursing decision regarding the patient's psychosocial status and ability to carry out the activities of daily living. Decisions are bound by beginning rules, by theory and by the individual patient situation (Szaflaski, 1997). Clinical nursing judgments result from the analysis and evaluation of multiple pieces of data taken from a variety of perspectives.

Since the early seventies, the nursing process has been the problem solving process by which students learned to make clinical judgments. The nursing process is a

rational linear problem solving process. A systematic process uses nursing terminology for a process of solving problems. However, it is questionable whether the nursing process is actually used for making clinical nursing judgments. For example, do nurses use the "nursing process" or another process to make clinical nursing judgments (Etheridge, Bos, & Bos, 1992)? Using a qualitative study, experienced nurses did not use the nursing process to make clinical nursing judgments (Fonteyn & Fisher, 1995; Grobe, Drew, & Fonteyn, 1991). In addition, Lauri (2001) found that in different countries there are different processes for making clinical nursing judgments. In addition using a qualitative "think aloud" written case study design, Brooks (1997) found that students did not use the nursing process to make clinical nursing judgments. In still another study, nursing students used eight patterns of making clinical nursing judgments (Tschikota, 1993). Even though a single process for making clinical nursing judgments has not been identified, nurses should be able to make good, timely, beginning clinical nursing judgments at the time of graduation.

Influences on ability to make clinical nursing judgments

Nursing education has been using the apprentice model for years. In the apprentice model nurses learn to think like a nurse by working with experienced nurses for many hours in the clinical setting. In addition, the students spent hours in the classroom where efforts were concentrated on delivering theoretical knowledge necessary for clinical practice. Clinical laboratories also were available to the student where practice of psychomotor skills could take place before the student actually performed the skill on a patient.

Today nursing education takes place primarily in colleges. The academic setting regulates the hours spent in clinical settings and the clinical laboratory by the credits allocated for the particular courses.

Furthermore, in the past faculty were expert practitioners as well as members of the faculty. Today, academic degrees are needed, but not necessarily clinical expertise. In addition, today, the patients' hospitalizations are very short. Therefore, the student often does not have the opportunity to realize the patient experience in its entirety. Hospital stays are shorter and so is the duration of student clinical experiences.

A mature critical thinker is one who takes on responsibility, has developed confidence, incorporates awareness, inquiry, investigation, imagination, is able to integrate information, is open and can make can make informed judgments (clinical nursing judgments) in the face of societal demands and challenges (Baxter Magolda, 2000; Petersen & Bechtel, 2000; Rheault, personal communication, 2003). The factors that may play a role in this lack of ability to make clinical nursing judgments needs to be examined. Health care settings as well as the type of educational process and student clinical experiences need to be examined. In addition, personal variables such as age, experience, and epistemological development level need to be addressed.

Health care settings have changed dramatically in the past decade (Huston, 1998). The patients are older and sicker. In the past students cared for people who came into the hospital with a single problem, stayed for several days for treatment of the problem, and then were discharged from the hospital to their home. Today, however, the patients are older, have multiple health care problems in addition to the one for which they are receiving health care services, and then they are discharged from the setting only slightly

better than on admission and needing a great deal of care at home. The presence of more ill patients with complex, unstable, transitory problems, the use of ever increasing technology, in addition to demand for shorter hospitalization by insurance companies and HMOS, has created a demand for rapid, accurate clinical nursing judgments (Adams, 1999; Angel et al., 2000; Daley, 1998; Di Vito-Thomas, 2000). This further intensifies the situation by making it imperative that much be accomplished in a short amount of time (Cope, Cuthbertson, & Stoddart, 2000). The new graduate has less time to think about what is occurring with the patient, how the problems affect his life, and what the patient needs to know in order to continue his life. In addition, in the past, graduates were able to learn how to make judgments after graduation. That is, with less complexity in the health care setting, there was time to further refine the skills of making clinical nursing judgments (Tobin, 2002).

Although nurses are educated via different types of educational programs that vary in the amount of time allotted to clinical practice, there is little evidence to suggest that any one program is more effective in enhancing the ability to make clinical nursing judgments than any other. Those who graduated from diploma programs, (3 year hospital and college based education), graduated with an associate degree from a community college (2 years of education), or graduated with a baccalaureate degree (4 years of education including liberal arts classes) all failed to show an acceptable level of ability to make clinical nursing judgments. Consequently, it does not appear that the type of educational program has an impact on the ability to make clinical nursing judgments (del Bueno, 1990a; Sietsema, 1992).

According to Szaflaski (1997) and Daly (1998), the knowledge base appears to be the most important factor in making a diagnosis. In fact, state boards of nursing regulate content that must be addressed in schools of nursing (Michigan Board of Nursing, 2001). That is the boards of nursing give broad categories of content areas to be addressed in the curriculum by the individual nursing department. This minimally identifies the general areas on which to base the curriculum of the educational setting. With the explosion of knowledge in the health care domain, other types of knowledge need to be enhanced and examined (Crow et al., 1995). Because it is difficult for the beginner to see the how the individual patient situation is similar to or different from theoretical knowledge, it has been suggested that content knowledge alone is not sufficient for learning to make clinical nursing judgments. Nursing knowledge is far more than facts and theories learned in the classroom (Crow et al., 1995; Grossman, Campbell, & Riley, 1996; Petersen & Bechtel, 2000). Lindeman (2000) suggests that the knowledge learned in the clinical situation is the art of nursing and includes the empirical, personal, and aesthetic, but is often deemed less important than the knowledge learned in the classroom.

Recognizing the increasing complexity of the health care environment, the pass score of the state board licensing examination (NCLEX) for nursing was raised in 2000 and again in 2003. The NCLEX exam is designed to identify minimal competency to practice nursing (Michigan Board of Nursing, 2001). However, the increased score necessary to pass the exam resulted in an increase in exam failures nationally. Accreditation bodies for nursing education programs mandated that educational institutions evaluate students' critical thinking ability. It was theorized that knowing students critical thinking ability would in turn point to ways for educators to help the

graduates' improve their ability to make clinical nursing judgments in complex health care environments (National League for Nursing Accrediting Commission, 2000).

At one time, state boards of nursing precisely prescribed specific number of hours in each clinical setting. That is, each student needed a specific number of hours in maternal child nursing, in mental health nursing, and medical and surgical nursing. However, today, most boards of nursing give each school of nursing the ability to make the judgment about how much clinical experience is necessary. That is, all the educational institutions are expected to make sure that the clinical experiences are sufficient for students to be successful as new graduates. Therefore, the hours of clinical experience are prescribed by each individual nursing program and may vary considerably (Michigan Board of Nursing, 2001).

When she compared student ability to make clinical nursing judgments with and without experience, Aquillo (1997) demonstrated that experience is important in learning to make nursing decisions. That is, taking care of one patient with an appendectomy is not always the same as taking care of another patient with an appendectomy. The patients are different, the responses to the condition are different, and, in fact, the entire situation is different because of the two individuals involved. Students identify that it is best to learn to make clinical nursing judgments in the practice setting because learning it in a classroom would not even begin to touch on everything that affect responsibilities in the clinical setting (J. Bush, personal communication, 2002).

However, at this time, it is not known what kinds of experiences in the clinical setting are most important or what kind of judgments students are encouraged to make. Do the students focus on tasks to accomplish such as giving baths and assisting with

routine activities of daily living? Alternatively, is there a broader focus to the clinical nursing judgments, similar to what the nurse engages in regarding what must be done for a patient as a whole to get him discharged? Do faculty and staff nurses just tell students what to do, rather than helping them make some decisions about the care to be delivered? Is the learning process a participatory one that includes student, faculty, staff nurse, and patient (Lindeman, 2000)?

Content knowledge, clinical experience, age, and type of nursing education do not appear to be major factors in determining the ability to make clinical nursing judgments. Another area for consideration to understanding this conundrum may be the epistemological development of the individual.

Epistemological development is part of intellectual and moral development and is concerned with the individual's belief about knowledge, who has it and where it comes from (Baxter Magolda, 1992; Belenky et al., 1986). These beliefs modify as an individual develops and has different experiences. Development toward more complex intellectual abilities proceeds sequentially and at varying rates along a continuum with each stage an advance over the last stage, with similar epistemologies in a given stage. The stages are not discrete, but overlap and may in fact be fluid while the direction and sequence remain constant (Belenky et al., 1986; Perry, 1970).

At graduation, the level of epistemological development of most college students is not at an advanced level. It is, on the average, at a low level of knowing (Baxter Magolda, 1992). Both Valiga (1983) and Frisch (1987) made a similar finding with nursing majors. Unless one has attained a significant level of cognitive development, good decisions are difficult to make in an appropriate period consistent with maintaining

the physiological and emotional safety of the patient as well as assisting the patient to cope with the disruptions caused by the problem. Lindeman (1989) says that "Obviously the real world of nursing today demands greater maturity and knowledge than it did even ten years ago" (p.23).

There appears to be another area of concern that has not been investigated. Almost nothing is found in the literature that discusses the graduate nurses' perceptions about learning to make clinical nursing judgments. Students need to have confidence in their own ability to construct knowledge and the ability to say what is happening in a given situation (Haffer & Raingruber, 1998; May, 1998; Tschikota, 1993; Valiga, 1983). In fact, in the clinical setting, a student needs to be encouraged to give an explanation for what they think; often they are very hesitant to venture a possible reason for things that happen in the clinical area. Many times beginning nursing students have distorted views of themselves as learners, and about the role of the nurse (Cook, 2003). One such view relates to where knowledge resides or where knowledge comes from. These beliefs about knowledge change as an individual grows and has different experiences, including experiences in the educational settings.

Decision-makers need to see multiple possibilities for what is occurring in a patient situation. They need to think about nursing as more than just doing what the doctor says, to recognize that they must create and identify clinical problems and select solutions to those problems even if those problems require medical intervention. However, students report that they are unaware of the complexity, the amount of thinking and problem solving that occurs in the clinical setting when they first enter the nursing

major. They often are unable to "think on their feet" and change a planned way of doing something because of what is happening with a specific patient at any given moment.

The nursing literature shows that how students learn to make clinical nursing judgments is not clearly understood (Bowles, 2000; Grealish, 2000). Therefore, a beginning exploration and descriptive study needs to identify the perceptions of new graduates about the learning strategies that were or were not the most helpful for learning to make clinical nursing judgments.

How important is the actual context in learning to make clinical nursing judgments? Is length of time, or actual hours in the clinical setting important? Is providing direct care to patients and groups of patients helpful?

What learning activities in the actual clinical experiences were most helpful? Does the graduate believe there are learning strategies that were not helpful? If so, what were they?

What type or amount of written assignments helps the learner understand making clinical nursing judgments and the nurse's role in making those clinical nursing judgments? On the other hand, do these graduates perceive that clinical nursing judgments are essentially based on what is learned in theory?

In the clinical setting were students evaluated primarily on written assignments, or on actual carrying out of clinical activities. What evaluation strategies were the most and least helpful? Was it helpful to have student outcomes for a clinical focus, or was there another way the student personally evaluated clinical experiences?

In other words, what insight do new graduates have about learning to make clinical nursing judgments. Are there common themes, or activities that hinder or

enhance the ability to make clinical nursing judgments? Describing clinical experiences that enhance graduates' ability to make clinical decisions is high on the research agenda of nursing educators. What types of learning experiences are most helpful to students for learning to make clinical decisions (Grossman et al., 1996; Hamers, 1994; Lindeman, 1989)? Learning about these insights, then, would help nurse educators design curricula and learning activities to enhance this ability.

Currently, there is no work described in the literature about the student or new graduate perceptions about making clinical nursing judgments. Therefore, this work focused on identifying the insights new graduates have about clinical nursing judgments and learning to make them. In addition, the impact of context and the strategies that were both helpful and not helpful are described.

Chapter 3

Methodology

The purpose of this study is to identify perceptions of new nursing graduates regarding clinical nursing judgments and learning to make clinical nursing judgments. The research addressed the following questions: What are the perceptions of new nursing graduates about how clinical nursing judgments are learned. In addressing this question, this research explored experiences the new graduates considered helpful in learning to make clinical nursing judgments as well as beliefs regarding their role in making clinical nursing judgments.

Research Design

This study used a descriptive longitudinal qualitative approach (Creswell, 1994; Maxwell, 1996). Nursing leaders suggest that qualitative studies are necessary to begin to understand how clinical nursing judgments and learning to make clinical nursing judgments are learned (Lindeman, 2000). In this study, semi-structured interviews were used to study the meaning of making clinical nursing judgments as well as the contexts in which the subjects' learned to make clinical nursing judgments.

Preceptors were interviewed to determine their expectations of graduates. Then the new nursing graduates were interviewed three times over a period of 6-8 months as they began work in a clinical setting. In addition, at the end of the first interview, the new graduates completed a case study scenario by writing out problems/nursing diagnosis with corresponding interventions and rational for those interventions.

Context

New nursing graduates who worked on adult medical surgical units in acute care institutions in West Michigan were selected for the context of this study. The institutions have from 200-500 beds. The patients on the adult units have a variety of problems such as pneumonia, fractured hips, congestive heart failure, peripheral vascular disease, or complications from diabetes. There are from 25-40 beds on the units and the numbers of employed Registered Nurses vary with the size of the unit. Only new nursing graduates and preceptors who work on adult medical surgical units were included in this study. Restricting the focus to only medical-surgical units of the hospitals reduced the variation in the expectations held for individual nurses. For example, expectations in critical care or obstetrical units differ from those on a medical surgical unit. Inclusion of nurses from these different units might confound the overall results of the study.

Participant recruitment, selection, and demographics

This study included two groups of participants, new nursing graduates, and preceptors.

Recruitment

Preceptors.

Preceptors are the individual nurses who work one-on-one with the new nursing graduates when the new graduates first begin work in the institutions. Nursing administrators recommended and gave the names of preceptors who frequently work with new nursing graduates on adult medical surgical units. Then the researcher personally recruited the preceptors for the study (Appendix D). Five preceptors each identified the expectations of new nursing graduates in a one hour taped interview.

New Nurse Graduates.

The new nurse graduates were a convenience sample. The researcher obtained the names of the first two new graduates from nursing administers at two institutions. The next two new graduates were working on the clinical unit where the researcher worked with nursing students, so were recruited into the study. They in turn referred other new nurse graduates, for six new nurse graduate subjects who agreed to be participants in the study (Appendix B).

An ongoing relationship was maintained with the new graduates to keep them engaged in the study for three consecutive interviews, as well as encourage them to share reflections they had about clinical nursing judgments and learning to make clinical nursing judgments. All interviews were held either before or after the new graduate worked a shift at the hospital. If the new graduate worked nights, the interviews were conducted before the new graduate began the shift. If the new graduate worked days, the interviews happened after the shift ended. The interviews occurred in empty meeting rooms that were available in the institution where the new graduate worked.

The new nurse graduates graduated from two different four-year colleges with a baccalaureate degree in nursing. They were female and between 22 and 26 years old with a mean age of 23.1 years. In addition, they passed the national council of state nursing boards (NCLEX) exam on the first attempt, participated in a nurse intern program after graduation, and no longer worked with a preceptor. Half of them studied outside of the United States for short periods and two of them had previous college education before entering the nursing major (Appendix L).

During the study, one new graduate left her position and the geographical area after the first interview, which was about 4 months after beginning the position. She was

not able to complete the study. Another left her position after the second interview (about six months after beginning the position) but remained in the area and was able to complete the study. All new graduates who remained in the study were given a gift certificate to a bookstore after completing the final interview.

Human Subject Protection

Informed consent

After the project was introduced to the preceptors, they gave written informed consent for audiotaped interviews (Appendix E) (Appendix F). After an explanation of the study, the new nurse graduates gave their written informed consent for three audiotaped interviews in addition to completing an analysis of the written case study (Appendix C).

Protection of Privacy

Confidentiality of the subjects was maintained by using a number instead of a name on transcriptions of the audiotapes. No names were placed on any written work. Only the numbers assigned by the researcher identifies all of the data. The names are kept separate from the numbers for use in transcriptions of both preceptors and graduates.

The data from preceptors and new nurse graduates was reported both in the aggregate and in some instances the data was reported for an individual, but there will be no way anyone can identify the individual graduate in the written report because fictitious names are substituted for numbers which in turn were substituted for actual names. At no time will anyone be able to identify the subjects from the data.

The transcribed tapes were available to one selected individual who validated the coding of the data from transcripts and the audiotapes, but no names were available to

anyone. The data is kept in a locked drawer and will be kept for five years at my home. The data is for my research and will not be used by anyone else.

Data Collection

Data collection consisted of audiotaped interviews with the nurse preceptors. For the new nurse graduates the data was three separate audiotaped interviews separated by two-month intervals and performance using a written case study.

Instruments and Procedures

Semi structured interview with nurse preceptors.

A semi structured semi structured interview with individual preceptors was carried out in order to understand their expectations of the new nursing graduates' ability to make clinical nursing judgments. The interviews were audio taped and transcribed word for word in order to have a complete understanding of what the preceptors thought about new nurse graduates' abilities to make clinical nursing judgments. The focused individual interviews gave a baseline understanding of what preceptors expected of new nursing graduates in general, but did not discuss specific types of patients or expectations related to the specific institution in which they or the new nurse graduate work. Follow up questions and prompts varied, however, with the individual interview. Each interview lasted from 30 to 45 minutes.

The preceptors did not quite know how to respond to the concept of clinical nursing judgments, so the researcher used the words, "think like a nurse." In addition, a question was added to the planned interviews at the time of the interview with the first preceptor. The preceptor was not forthcoming with what she thought that new graduates needed in their education. Therefore, the researcher encouraged her by telling her that

what she had to say was important for future nursing education. This part of the interview was also added to all the other preceptor interviews.

Semi Structured Interviews with New Graduates.

Interviews with new graduates occurred on three different occasions. An intake interview for each graduate occurred one to two months after she started practice as a nurse intern, passed NCLEX, and completed orientation with the preceptor. Three months after the intake interview, they were again interviewed using a similar format. A final interview occurred approximately six months after the first interview. This longitudinal set of interviews gave the subjects an opportunity to adjust to the nurse role and to reflect about learning to think like a nurse and what was or was not helpful in learning to make clinical nursing judgments. It was hoped that the subjects' would be able to reflect about what they learned in school, and what was helpful in the work setting or what transferred from theory to practice. A standard semi-structured interview protocol was followed for all subjects with interviews lasting between 30-45 minutes, on three different occasions. Additionally the researcher followed verbal cues for exploration. These consisted of words such as explain that more, or tell more about that.

Questions on the first interview were slightly different from questions on the second interview. The third interview was slightly different from the first two. All interview questions, however, were designed to elicit the perceptions of the new graduate about the major research question-- learning to think like a nurse. The initial questions were developed by the researcher, and reviewed with another nurse educator. The second and third interviews focused on clarifying prior data, validating preliminary analyses of the data as well as asking some of the same questions about their perceptions about

learning to think like a nurse, and telling about some of the recent clinical judgments the new graduate made (Appendix J) (Appendix K). All interviews occurred before or after work, whichever was most convenient to the subject.

The first one-hour interview focused on demographic data and the concept of clinical nursing judgments. These words seemed too vague, but they did quickly respond to the words 'think like a nurse'. With the switch in words, the subjects were able to talk about the broad concepts of decision-making and the perceptions of the new graduate about learning to think like a nurse and what was helpful and not helpful in the educational experience for learning to think like a nurse (Appendix I). Other questions were open-ended and asked about the subject's perceptions about learning to think like a nurse, how those perceptions may have changed since beginning nursing courses, and descriptions about both good and not so good learning experiences.

The second interview asked in more depth about the role of faculty in helping students learn to think like a nurse. In addition, the new graduates described some recent clinical judgments that were memorable to them, because it seemed that asking about the helpful and not so helpful, learning strategies was being asked too soon. The answers were not fruitful, but seemed repetitive, so then I asked them to tell about some of the actual decisions that they were making. This seemed more helpful in identifying what they learned in the context of work that they did not learn while in school.

Therefore, I incorporated this idea and question into the interviews with the remaining subjects to tell about decisions they had made recently. That is, I changed to having them tell stories of the decisions they were making rather than have them answer questions about what was helpful and not helpful in learning to think like a nurse.

The third interview asked again about helpful and not helpful learning experiences and the role of faculty in helping students learn to think like a nurse, as well as some stories about recent clinical decisions they had made. In addition, the case study with the priorities the new graduate identified at the first interview was discussed to see if there were any changes in their thinking about the case study and to validate why they made the decisions they made about the case study.

Other strategies were also used for verification and interpretation of the interviews. The written transcripts of the interviews were shared with the individual subjects and they were asked validate the accuracy of the transcripts.

Case study.

After the first semi-structured interview, each subject read the same written case study about a patient situation and wrote out the problems/ nursing diagnoses, interventions and rational for each intervention found in the case study (Appendix G). The purpose of this procedure was to provide information on the overall ability of the new nursing graduate to make clinical nursing judgments. The written case study is about a woman admitted to the hospital with an exacerbation of asthma. The case study was used with baccalaureate students before this study (Etheridge et al., 1992) (Appendix H).

As the sole interviewer of the subjects, I began the first interviews by asking about nursing clinical judgments. Initially, the new graduates or preceptors did not clearly understand the question. There was hesitation to respond and the new graduates requested that the questions be repeated. So I expounded a bit, and explained that nursing judgments could include decisions about responding to emergency situations, supervising the care provided by others, figuring out how to perform complex psychomotor skills,

working collaboratively, or leading and interacting within the care giving team. This assisted the subjects in being able to discuss what nursing activities and 'thinking like a nurse' involves. A reason for the subjects' confusion may be that use of academic language is not familiar to staff nurses. Using the phrase 'think like a nurse' (Heaslip, 2003) encouraged both graduates and preceptors to share their stories and perceptions. Because they responded better to that terminology about nursing clinical judgment and how to make them, the focus of this research changed to what the perceptions of new nursing graduates were about learning to 'think like a nurse' rather than what perceptions were about clinical nursing judgments and learning to make clinical nursing judgment.

Data Analysis

Each audiotape was transcribed verbatim immediately after the interview and verified with the subjects by use of a written or emailed transcript. There were a total of 66 pages of transcripts for new nursing graduates, 11 pages of transcripts from preceptors and 6 pages of case study findings for a total of 83 pages of data for analysis.

In addition to the researcher reading and analyzing the data, an expert nurse also read the data for accuracy of the transcripts and for identification of themes. When discrepancies between the two nurses occurred, a third nurse was consulted about the decisions.

Preceptor interview transcripts were analyzed separately from and before the interviews of new graduates. There was a several week time lag between the interviews of the preceptors and that of the new graduates, so the themes from the preceptors were identified before the interviews with the new graduates.

For the new graduates, the interview transcripts were analyzed before the next interview. This gave the opportunity to discuss the transcripts and data analysis with the subject at the beginning of the next interview. The transcripts were analyzed for common words and themes across interviews. That is, each set of first interviews was analyzed for common themes, words, and answers to the questions.

After each set of transcripts was analyzed, the themes were evaluated across all three interviews. That is the themes were analyzed using all the interviews to identify changes in themes. In addition, the data was analyzed according to the major questions of the interviews. That is the major questions for each interview were analyzed for themes. Some themes were constant across interviews and other themes were evident in one or two of the interviews. For instance, the performance on the case study was only evident in interviews one and three, while responsibility was evident only in interview one.

After the first interview was completed, the performance ability of the new nurse graduate was evaluated using a case study. At the third interview, I discussed the findings from the case study with the new graduate.

Finally, the transcripts from the interviews of the preceptors and the new graduates were analyzed for similarity in themes. Similar themes were found in the interviews of both preceptors and new nursing graduates.

Chapter 4

Findings

In the initial interviews, the responses of the research participants suggested difficulties with understanding phrase, 'making nursing clinical judgments.' When this phrase was replaced with the phrase, 'think like a nurse,' (Heaslip, 2003) they responded more spontaneously and energetically. Thus, the focus of interviews changed somewhat from learning to make nursing clinical judgments to learning to 'think like a nurse.' As will be evident shortly, however, however, in the minds of the participants these two ideas or phrases are virtually synonymous.

The data analysis suggests these research participants see that the transition from being a student nurse to working as a staff nurse as a time when they learn to think like a nurse. This process of learning to think like a nurse is characterized by the emergence of confidence, acceptance of responsibility, and the ability to think more critically within and about one's work. Finally, participants identified several experiences both in their education and in the early months of their employment that contributed to their learning to think like a nurse, including how learning did and did not occur.

Learning to "think like a nurse"

The ability to think like a nurse reflects an awareness of oneself and belief in one's ability for competence and accountability. These characteristics generally take time to develop and improve with encouragement and experience. Most nursing students are reticent to make large decisions because they do not have the experience of what it means. According to Reese, "I didn't make very many decisions as a student." Maggie

and Olivia did not know if they were ready to make decisions as a student. Luann said, " I didn't feel like I knew enough as a student to make decisions by myself."

The emergence of the ability to think like a nurse was perceived to be associated with developing confidence, acceptance of responsibility, and changing relationships with "the other" as well as increased experiences in the clinical setting.

Developing Confidence

Confidence is the belief in oneself, one's judgment ability, as well as possessing the knowledge and ability to think and draw conclusions and perform nursing skills. In many instances, new nursing graduates lack or possess confidence to a limited degree. Maggie said, "Once you are out of school you do not feel as confident as you wish you did. It is just something that takes time." Olivia stated that confidence is something that takes months to develop. Reese found that she just did not have the confidence to know what to do in all situations.

> I learned skills in the lab at school, but doing it on actual patients is very different. The anatomy varies a little between patients and they react differently to the fact that they need to have the procedure done. Patients also react differently if there was pain involved with the procedure. I worried whether I would be able do the procedure correctly and complete it on time. Therefore, I wanted to do as many of the skills as early as possible in my career to gain the ability and confidence to perform those skills.

According to Sue,

> I was not confident about what I was doing. I thought there would be a lot more time to spend with our patients, getting to know them, and understanding like who they are as people. I just did not think it would be as stressful. I did not think it was constant running and thinking."

The new graduate was afraid she would not know what was going on with each individual patient. She feared she would not know what the assessment data meant and that if she missed anything and harm came to the patient it would be her fault. According

to Sue, "It is taking the information that you get and knowing whether or not it was important enough to call the physician or whether it was something that could wait."

Most important to these participants is the need to put the information together and knowing what it means. Luann wondered, "What do I do about an elevated temperature in a post operative patient? Do I give Tylenol, have them cough and deep breathe, or have them use the spirometer or call the physician? " She did not have the confidence to make the decision on her own.

This concern was reflected in the preceptors' perceptions of the new nursing graduates as well: One preceptor said, "New graduates lack confidence in their ability to make decisions about data they collect, how to compile the data, how to develop a conclusion about the data, as well as knowing what to do in a given situation."

While both the new nurses and their preceptors felt this initial lack of confidence among the new nurses, it was also evident that, over time, they perceived a developing confidence in their work.

After six months experience, Maggie reported,

> I feel more confident. I know when to call the physician, or when it is something that can wait until the next day, such as how to deal with a situation in which they ordered the dressing removed. The wound was not ready to have the dressing removed. It was during the middle of the night. Therefore, I decided to leave a note for the doctor to deal with it in the morning.

Katy showed increasing confidence in her decisions,

> I had this woman with skin break down. She claims it was because of diarrhea, but I believed it had more to do with her lying in bed so much. So, I made her get out of bed to use the bathroom, even though it would have been a lot easier to have her use the bedpan.

Olivia reflected this growing sense of confidence in her ability, and developed her own correct conclusion regarding a patient's status rather than accepting a colleague's statement about a patient.

> By the end of the shift, the patient was not doing well, but a diagnosis had not been established. Twenty-four hours later, the nurse caring for her reported that she was just fine and had been sleeping all day. When I assessed her, she was not responding and her respirations were unusual. I conferred with more experienced nurses and called the physician who ordered blood studies. Based upon the results of the blood studies the patient was transferred to the Intensive Care Unit.

Olivia believed in her ability to determine that a problem existed and validated her observations with experienced nurses after several more months of work. Luann reports that several months after beginning practice,

> I feel like I am doing a lot of advocating for patients, especially regarding pain. I had a patient last night that has sickle cell anemia but was not in with a crisis. He had right hip pain from a surgical abscess. He knew what it took to get his pain under control. The doctor did not want to give a higher dose of pain meds because he thought it was more pain meds than someone should need for having pain from a surgical abscess. I think it helped the patient to have me advocate for increase medication for better pain control.

Approximately nine months after graduation, the new nurse graduates had developed the ability to make decisions that are more complex as well as act upon those decisions independently. Reese reported,

> Last night I took care of a patient that called and said he was having a morphine withdrawal, but as I assessed him and got him to talk about how he was feeling, I concluded that he was having an anxiety attack. He thought because his hands were constantly moving and he felt restless that he was having a morphine withdrawal. I recalled that he had a history of anxiety. I had given him Valium and xanax earlier. I could not give him any more. I decided to give him a back rub, and after which he said that he felt so much better.

The intervention of providing a backrub relieved the patient's anxiety and was something that the nurse provided immediately and independently.

Learning Responsibility

Responsibility is the knowing that one is accountable for ones decisions, actions, and thinking critically. Nurses are responsible, accountable, and in charge of patient care. This is contrary to what students expected. They expected the doctor to be responsible for patient care decisions. In addition, the new graduates were surprised at the responsibility expected of them because they did not experience the responsibility as students. In addition, the level of responsibility was overwhelming for some of the subjects in this study.

The new graduates recognized that taking responsibility appropriately is a significant part of being a nurse. The patient depends entirely upon the nurse for watchfulness and decisions for their well-being. According to Katey,

> We have to apply with our hands, plus think, and look at everything from nurses interacting together and interacting with their patients and families and other health care providers. All this working together is all on your plate. It is a lot of responsibility."

"It is not until you experience it, that you really understand the responsibility of being a nurse," relates Olivia. Reese said, "it is my responsibility now and I didn't expect the responsibilities to be so great. It is not until you experience it that you truly understand the responsibility of the nurse'.

Luann stated,

> I did not realize people went to nurses for so much. They want you to tell them things, they want you to reassure them, and they just look to you for so much more information because the doctor does not always spend that much time with them.

Katey said,

> The responsibility was more than I thought it would be because I thought it was more the doctor's responsibility. A lot of it is nursing responsibility, though.

> Almost more so sometimes, because nurses are the ones the ones who are with the patient 24 hours a day and the nurse is the one who decide what will happen with the patient's plan of care.

The new graduates discussed the lack of responsibility they felt as students. When students take care of patients, they are never entirely responsible for the patient's care. The staff nurse and the nursing professor also share part of the responsibility. Consequently, it was difficult for the new graduate to cope with the responsibility of a nurse when beginning practice. According to Reese, "When you actually become an RN and take patients yourself, then you really realize what the responsibility is." Sue said, "I am not just a student that that can pass the responsibility off to someone else."

New graduates did not appear to have a realistic picture of nursing responsibility. In fact, of this sample two of the six new graduates left their first position within six months after being hired because they felt the responsibility was too great. It takes some graduates longer to adjust to the level of responsibility expected of a nurse. The pace and tone of each clinical setting as well as the shift and time of day has a different impact on the individual's ability to accept responsibility. Reese talked about "crying all the time, because I can't sleep during the day, and 'my body is 'all mixed up'."

Relationship to 'the Other'

'The other' is the individual or individuals the student and then new graduate looked to as an authority. 'The other' was the person she depended on, or used as an authority, to help her 'think like a nurse,' and 'the other' changed with time and experiences. The new graduate did not believe in herself and therefore used the other in validating decisions she made. Initially "other" was the preceptor. Then it proceeded to include experienced nurses. Finally, it became her colleagues. As confidence grows and

the new graduate encounters more experiences, which gives a greater understanding of the whole, the new graduate begins to trust herself and accepts the responsibility of thinking like a nurse.

Initially, the new graduates asked the preceptor many questions. Then they learned that they did not need to know everything because they found support from the preceptor. Luann said, "I'm not too sure about the decisions I have to make. I do not always have the confidence I need. Although I am quite positive my thinking is right, I always check with my preceptor." The preceptors' said that the new graduate "wants me to confirm that what they are thinking about a situation is the same as what I am thinking" corroborated this idea.

Later, conversations centered on preferring to work with experienced nurses. The new graduate found it less necessary to go to the preceptor for guidance. Maggie said, "I really want the experienced staff nurses working with me. I do not want just any other nurses, or former classmates. Experienced nurses know so much." Katey reported,

> When I had a patient with a deep vein thrombosis and even though he was on a heparin drip, the lab studies showed that he needed to get a bolus of heparin. I did not know how to do this. I validated with an experienced nurse how to give the drug safely.

Finally, the new graduate appeared to be more confident of her own ability to think like a nurse and less worried about not knowing everything. Olivia recognized she did not have an experience with dying patients, however, it did not worry her. She felt comfortable not knowing all that she wished she knew. "The husband asked questions, but I did not know what to tell him, so, I said I did not know, but I would find out."

Thinking critically

Learning to think critically about one's work is a large part of nursing. It occurs continuously, expands with experience, and eventually becomes second nature. In addition, thinking critically takes place independently, collaboratively with other nurses and/or other health care team members, as well as in concurrence with physician orders.

Thorough and exact evaluations are characteristics of thinking critically. It often occurs in a situation that is at a point of imminent change. Thinking about all the implications of and options about each single issue of patient care is thinking critically. It is multifaceted, includes gathering data, evaluating the data, and putting disparate pieces of data together to identify a problem followed by determining the appropriate way to treat the problem. The conclusion reached by using this type of thinking may be to continue in the same manner or entirely change the approach to the problem. Sometimes a simple nursing intervention such as giving a patient a backrub solves the problem. Other times it may be necessary to confer wit the case manager or the physician to solve the problem.

The new graduates found that "thinking like a nurse" was a larger issue than they initially thought. Incorporation of thinking critically into their modus operandi was a function of time. Luann said, "Initially, I just thought there was kind of a flow sheet that would give directions. It is not like that." According to Maggie, " It was a big surprise when I first started practicing, there was so much thinking and that so much thinking is always a big part of what nurses do." Reese remarked, "When I started doing this, I just thought it was taking care of people, but it is a lot more thinking critically than I thought it would be." According to Sue,

> After six months, I feel more confident. I know when to call the doctor. I know whether I need to call immediately or whether it can be postponed. I feel more confident because I have been here longer and have had more experiences,

Thinking like a nurse while taking care of patients is includes more than performing psychomotor skills and procedures. It is also making decisions such as should I take someone off oxygen or not or should I give one pain pill or two" Olivia reported. "I think all the time, whether it is making a decision to give one or two pills for pain." Thinking like a nurse includes decisions that are more complex, for example, independently identifying all the things that I have to monitor.

> When I hang a dopamine drip, I also needed to monitor urinary output. I was not told to do that this, but if the doctor called and asked about the urine output, it would not be responsible to say that I was not told to monitor the urine output. Just little things that I need to correlate mentally.

Thinking critically includes consulting with other members of the health care team. It is how a nurse decides what to do for a patient. Sue said, "If a patient has a headache do I apply a cold compress, give them the powerful pain medications, or call the physician to get an order for Tylenol –at 3 am. "

Thinking critically means knowing that because patients have the same medical diagnosis does not mean they all respond the same way to the treatment modalities of that diagnosis. Katey described thinking critically in the following ways. "Patients do not always fit into the clinical picture that you get in school. That is the biggest thing--putting the information together and knowing what it means." Sue said, " There are just a lot of things I have to think about, and it is hard to keep it all-straight."

Maggie found that 'thinking like a nurse' is bigger than I thought it would be.

> Within five minutes I can hang a bag of IV solution, go to the next patient because he is having chest pain, and another patient is vomiting. You constantly are reprioritizing what you need to think about and do.

Olivia stated,

> I am always reprioritizing what I am doing. Does the blood sugar of 30 take a priority over someone having chest pain? Which patient do I see first, and whom do I call to help me in this situation. Can the unlicensed person help the patient with the blood sugar of 30 while I attend to the patient with the chest pain, or is the chest pain a repeated problem so the unlicensed person can talk with him? Is the patient with a blood sugar of 30 unresponsive and needs IV dextrose that I need to give because the unlicensed person cannot?

The preceptors believed that new graduates were taught thinking critically throughout the educational process. However, it is repeated use of this mode of thinking, which helps it become second nature. One preceptor said 'The new graduates were taught thinking all through school, but I think it is a matter doing it repeatedly that helps them learn how to think critically with relative ease. "

Thinking critically about doctor orders.

The new nurse also learned that at times it was necessary to disagree with the physician as well as other members of the health team in order to provide patient care that was sound and based upon scientific principles. The new nurse learned through experience that she needed to evaluate orders from the doctor. She learned that there needs to be ongoing analysis of the situation and that she needed to think about the meaning of implementing doctor orders was Maggie's point of view. She said,

> I thought doctors would be around to tell you what to do. They are not. I had a patient in 4-point leather restraints who was very agitated. He was going through DT's. I got an order to sedate him enough to be able to go through that and, perhaps rest through the night. I was constantly going in, checking respirations, and checking to see if he could be awakened. One time when I went in, he was breathing very hard and right then, I put on the oxygen and called another nurse and she called the doctor. They came up to the unit within seconds-- it seemed like. The patient was transferred to the Intensive Care Unit, was intubated, and put on a ventilator. That was a huge decision even to just notice how serious the situation was. I had just talked about the sedation plan with the doctor only an

hour earlier. I felt like the things I was doing were directly ordered from the doctor, but I still had to use my own judgment.

Additionally, preceptors stated that the judgment of the new graduate is not finely tuned. The discernment necessary is not always present in the new graduate. They need to learn, for example, that "one does not blindly follow a physician's order simply because it is a physician order."

According to Reese, "In reality, you constantly interact with doctors, have to decide what you want for the patient, then call the doctor, and ask for it. It is important to learn that skill as well as the ability to think critically." Maggie said, "It was really nerve racking, for me, when I started practice, to call the doctor. I did not do that before graduating."

In summary, the new graduates discussed what they remember about learning to think like a nurse. The discussion primarily focused on learning in the clinical settings. The themes of confidence and responsibility were very prominent as they first began work as a graduate. In addition, their discussions of the importance of 'the other' showed that 'the other' seemed to change with time. Thinking critically was more expansive than they thought it would be. They expected to be given more direction in the delivery of patient care. All of these themes combined to demonstrate the beginning of self-authorship as a nurse.

How the New Graduate Learned

The new nurse graduate learned how to think like a nurse through clinical experiences with a variety of patients, with faculty help, discussions with peers and through other learning experiences.

The clinical experiences are those that are actually involved in taking care of patients as well as observing patient care. The experiences are in actual settings where the student and then the new graduate learned about nursing care with real patients. The clinical experiences amplify what is learned in the classroom. The experiences are multifaceted, in a variety of settings and with many different patients.

The Primacy of Clinical Experiences

The most helpful learning strategy for learning to think like a nurse, according to the new graduates, was being in the clinical setting with patients and having varied experiences with patients. According to the subjects, "Being with patients helps it all come together," so being in the clinical setting is important for learning to think like a nurse. It is in the clinical setting that "correlation of classroom learning with actual practice occurs. It is here that everything comes together," was their statement.

Students are in the clinical setting for six to seven hours on two or three different days in the week. They are assigned to care for one or two patients in conjunction with a staff nurse. Learning in the clinical setting is limited to those particular clinical experiences. "Learning to think like a nurse, may be comparable to learning a new language," according to Luann. "It is difficult to learn a new language unless one is immersed in the culture, and interacts with people who speak the language." In the clinical setting students practice nursing skills, have different experiences with a variety of patients, interact with various team members; all experiences had significance in completing their picture of how to be a nurse. Olivia remarked,

> It helps to be exposed to all kinds of situations. Hands on are necessary for correlation of theory to clinical, and to actually do many skills. Clinical is also the best place to learn big things such as delegation and prioritization.

Luann stated,

> The more I did skills the better I got, but it takes a lot of practicing things repeatedly. It is just nice to get many different learning experiences in during school, like experiences with catheters and IV's and stuff like that, and actually doing it because then you have had those experiences, you don't need to look for them when first starting as a graduate nurse.

Similar thoughts are reflected in comments made by Reese,

> In school, we spent a lot of time with faculty, so we were not involved in the total care of the patients. We did not always know about the things that did not directly affect the patients—such as talking to other health care providers.

It is not just direct patient care, however, because it includes all the things that happen with members of the health team, in the setting, and with multiple patients. It is more than just the care of the patients assigned on one shift and includes experiences that include working with whole team to see the big picture. According to Sue,

> Now we have four to seven patients instead of the one or two we had while we were in school, so we have to constantly prioritize care, and delegate some activities to unlicensed care providers, because the conditions of patients are changing and we are the first to know about those changes.

Olivia stated, " I check doctor orders and I didn't do that in nursing school, so I'm more up to date on what is going on with the patient." Reese said,

> I know a lot more of the people that work here, while in nursing school I did not know the social workers and the doctors. I never discussed the plans for the patient with them and I do that now, so I have a better idea of what the overall plan for patients

Small parts of experiences seem to add to an understanding of whole picture of what happens to different patients. According to Katey, "there is a lot more going on with patients than I realized. It is far more complex than I knew, because I didn't see everything." Sue said, "Now I see the results of my clinical decisions, while in school, I didn't, because I was not in the clinical setting long enough, and didn't have the

opportunity to see the results of what I did for patients and what I thought about might happen."

Despite the enhanced learning in the clinical setting, the new graduates recognized the importance of learning in the classroom and laboratory setting as being very important in their education. Katey said, "There is a ton of time in the classroom; you are almost overloaded with information, but it is so important, too. You cannot learn everything in the clinical setting. You can only fit in so much."

Diverse experiences with patients.

The new graduate needs multiple experiences to learn the reality of nursing and to learn the whole picture of what nurses do and how they think. Repeated clinical experiences assists the new graduate in becoming more adept at providing patient care as well as developing alternative approaches that are safe and beneficial. They also learned what aspects of patient care to address immediately and what to postpone. For Luann,

> Experiences with different types of patients, with different types of patients requiring different skills, interacting with health team members asking patients questions like what helps them, and what makes it worse, listen for lung sounds, a lot of experiences with catheters and IV's and stuff like that, and actually doing it are the things I learned.

Repeated exposure to patient care situations assist new graduates in learning to continually analyze data and realize the significance of the data. Reese said, "It helps now to have many experiences, because in school we didn't have any repeated experiences really." The preceptors found that new graduates "need to understand and interpret assessment data, report changing patient conditions, synthesize patient information and know how to act upon this information."

Multiple patient experiences over time changed the understanding of what nursing was all about. Olivia said "I learned the most during leadership when I was immersed in the setting; I was there more days in a row, and saw the same patients for three or four days at a time" Reese acknowledged that the best learning was "with multiple patient experiences." Luann said, "The experiences all begin to add up to a total picture of what happens to patients." While Maggie said, "It happens a little bit at a time; when the experiences are all put together for a whole picture." Sue remarked, "As you are going through the experiences and taking patients, it takes time to begin to understand what thinking like a nurse is all about."

New graduates did not think they had enough autonomy and opportunities to think for themselves during their clinical experiences as students. Often when working with a preceptor, the preceptor carried out the nursing activity while the new graduate observed rather than the reverse. In addition, student nurses are not ready to perform all the activities that a new graduate does. For instance, according to Luann,

> I check orders and I didn't do that in nursing school, so I'm more up to date on what is going on with the patient. I know a lot more of the people that work here, but while I was in nursing school I did not know the social workers, and the doctors, and I was not able to discuss the patient situations with them.

The new graduates reported that some clinical experiences were not worthwhile, resulting in boredom. Luann said, "Some clinical experiences were not realistic, because it just seemed like we did a lot of sitting around; it is kind of as if you are being babied and we were bored." Reese reflected similar thoughts, " If you have more than one patient, you learn organizing, prioritizing, delegating, and knowing what activities can wait."

Working with Faculty

In general, the new graduates felt that faculty was more helpful than staff nurses in assisting the new graduate learn to think like a nurse. Maggie remarked, "The role of professors is to integrate a sort of a picture of what a nurse looks like, how a nurse acts, how a nurse thinks, teaches, and just basically the whole aspect of what a nurse does. I think the faculty helps give that broader picture." Olivia said, "Faculty is the primary example you are seeing and watching, because you are not really working with a nurse."

Asking the students questions about the patients was one of the most helpful learning strategies faculty used for helping the students learn to think like a nurse. Luann said,

> Having faculty ask questions about what I was thinking about patient care and why I was thinking the way I was, to have faculty constantly ask questions, like what would you do if such and such would happen, or have you thought about this or that in the care of your patient. It was helpful to have the faculty help you put all the pieces of the patient care situation together.

Reese said, "Having faculty kind of talk you through making your own clinical decisions was very helpful in learning to think like a nurse."

Another learning strategy that was very helpful, was for students to listen to the stories the professors told; "the stories about why the professor did what they did in specific situations and what they were thinking at that time. Every nurse has a different way of looking at things" according to Reese. Luann summed it up when she said, "Professor stories are very helpful, because the stories are about what happened and what mistakes they made, or what good things they'd done, those help me learn" according to Luann.

In time, as students, the new graduate found that a certain modicum of autonomy was helpful in learning to be self-reliant in the role of the nurses. "If I am able to perform some skills independently, my confidence increases," according to Olivia. Maggie said, "When I did not have the professor right there, hovering over me, I felt like I had to actually think through things myself."

Finally, the new graduates found it intimidating when faculty watched every move they made in the clinical setting. "It is nerve racking when faculty watches everything you do" according to Maggie. However, it was supportive if faculty is available for clarification and verification of what the student planned to do.

Discussions with Peers

Listening to and talking with other students gave an added kind of experience for students. The new graduates said that as students, they found that discussing experiences with peers was very helpful; plans of care, areas for improvement of patient care, how they might approach care in another manner. "It was helpful to talk about experiences and plans of care with the professor and other students," according to Reese. Olivia said, "It seemed to 'stick better' when there was a discussion." Luann said, "It was helpful to learn from other students and the patients they had, the patient diagnosis and the care of that patient. Each of us did not have the opportunity to see everything so it is helpful to hear about other students' experiences."

Other learning experiences

Writing care plans was not a helpful learning strategy. There are volumes of standard care plans available that may be applied to specific patient care situations. Students spent hours writing care plans that they did not use. Students usually handed in

the written care plan a day or so after the clinical experience. Sue said "Writing care plans is an exercise in futility and done to satisfy faculty."

According to Katey, "In nursing school, writing care plans did not help build confidence in my ability to think. I would spend hours and hours writing out care plans, and I never did anything with the care plans because it was done to satisfy the professor." Sue said, "I did not spend as much time with the patient as I would have liked, but spent most of the time sitting writing paper work." Maggie said "I can think of times in the hospital when I actually had to think through things; I can remember those, I can't remember the written stuff."

Other experiences in the classroom and laboratory were helpful. The lab experiences were good if they simulated reality and if the students had to work to understand what was happening. It was not helpful to merely observe a demonstration of a psychomotor skill. It was more helpful to figure out how to do the skill and several days later give a return demonstration of the skill. In addition, "we did not get a lot of experiences with setting priorities" according to Reese. Olivia said, "Moreover, there were a ton of questions on NCLEX about priority settings and being a charge nurse and taking assignments. So those kinds of learning experiences, even when discussed outside the clinical setting, are extremely helpful."

Examinations and tests were another helpful learning strategy. Because tests are knowledge application, they demonstrate how one takes information from a variety of places to come to a decision. They found it confusing as students, but believe it was learning to think critically. Sue said,

> I just remember one test when the faculty said this piece of information goes with this piece of information and that goes with that. I did not understand that at all.

My mind didn't go there, but now, I totally understand how a variety of pieces of information are put together to make a decision."

Developing a holistic understanding of 'thinking like a nurse'

Performance is the execution of a task with efficiency, precision, and finality. A responsible person possesses the ability to act correctly without an authority figure present, make rational and moral decisions independently and is answerable for hers behavior. Initially, in this research, using the case study (Appendix H), the new graduates thought only about basic nursing care for the patient. The new graduates identified the priorities of care for the patient as anxiety, respiratory problems, and lack of knowledge. Half of the new graduates did not identify the respiratory problem, which was the priority problem. None of the new graduates identified giving medication as the major intervention for the breathing problem. Those that identified anxiety did not recognize that hypoxia (lack of oxygen) causes anxiety.

Later, the new graduates were able to incorporate giving medications into their care of the case study patient. When asked why they did not address medications in the written paper, Katey said, "Medications are a physician intervention even though nurses give the medication." Experience taught them that medications are an integral part of patient care, which nurses implement, despite the fact that is not a part of the nursing care plan that they were required to write for faculty. Maggie said, "Just teach students to look at the whole picture of what happens to patients."

For the most part, over time, the new graduates learned self-confidence and how to cope with the responsibility of nursing. They learned to trust themselves to make decisions while still collaborating with other members of the health care team. Thinking critically became the modus operandi for the entire time caring for patients.

The best learning experiences where those in the clinical setting with patients. In addition, having faculty ask questions and discussing patient situations with peers where very good learning experiences. However, even after nine months, the new graduates still could not find any value in writing nursing care plans or other clinical papers.

Chapter 5

Discussion

The intent of this research was to ascertain how learning to make clinical nursing judgments occurs from the perspective of the learner. This study used a longitudinal, semi-structured interview format along with case study methodology with new graduates and with registered nurse preceptors. The goal was to gain understanding of new graduates in their role as hospital staff nurses. The interviews provided insight into the perceptions of the new graduates themselves and the preceptors' perceptions of the new graduates in the role of the beginning staff nurse. Of particular interest is the ascertainment of how learning to make nursing clinical judgments occurs from the perspective of the learner.

During the interviews, it became apparent that there was better response to the phrase "thinking like a nurse" than the phrase "making nursing clinical judgments." Therefore, the focus of this research changed from learning to make nursing clinical judgments to learning to think like a nurse.

Review of the data revealed similarity between the perceptions of the new graduates' and the preceptors' of the processes involved in learning to think like a nurse. Both agreed that thinking critically was an important component in learning to think like a nurse and that the theoretical aspects of thinking critically had been included in the nursing curriculum. In addition, performance of the new graduates on the case study indicated that the new graduate did not understand nursing care as a whole. Further review of the data showed that part of the difficulty for new graduates to think like a

nurse appears to be that they did not have a realistic mental picture of nursing. Before students were assigned clinically, they thought physicians were always present to direct patient care. According to Olivia, "I thought (there would be) one doctor always around and he is just constantly telling you what to do." Furthermore, the close interrelationship between doctors and nurses working together on behalf of the patient often was obscure to them.

At times, the transition from being a student to a new nurse graduate nurse was viewed as a time when they learned to think like a nurse. They did not negate the educational experience but because they were far enough removed from it, they could not recall specific examples of learning to think like a nurse in their education. The new nurse graduates identified several experiences both during their educational process and during the early months of employment that contributed to their learning to think like a nurse, including how learning did and did not occur as they remembered it.

Emerging Professional Identity

New graduates found that "thinking like a nurse" was a larger issue than initially thought. According to Sue,

> There is just a lot things I have to think about. And it is hard to keep it all straight. And you just have to go through the whole process. There's a lot of time when you have to think through things.

Professional identity includes the amounts and kinds of thinking in which the professional engages. The context of thinking depends on the profession, but the individuals in all professions learn to think critically about the topics important to the profession (Costello, 2004). Doctors think about diagnosis and cure, physical therapists about mobility and movement, engineers think about roads and machines, and nurses

think about the multiple aspects of nursing care for individuals. Cook, Gilmer, and Bess (2003) found that nursing students did not have a complete professional understanding about the profession of nursing. They found that the individual's identity as a professional was limited. That is, the beginning student had limited ideas about the amount of advocating and managing of patient care. As the professional nurse had repeated experiences in the context of nursing, their identity developed and expanded. Included in this identity is epistemological, intrapersonal, and interpersonal development.

Epistemological development

Changes in epistemological development are considered a part of intellectual and moral development. Epistemological development is concerned with the individual's belief about knowledge (Baxter Magolda, 1992;Belenky et al., 1986; King & Baxter Magolda, 1996). Theorists provide strong evidence of developmental movement and change in college students' epistemic beliefs. The move toward more complex intellectual abilities appears to proceed sequentially and at varying rates along a continuum (Baxter Magolda, 1992; King, 1994; Perry, 1970).

The epistemological development of most college students remains at a low level of development (Baxter Magolda, 1992; King & Kitchner, 1994). In addition, Frish (1987) and Valiga (1983) found that nursing graduates were at the same stage of development as other college graduates. That is at graduation the students were at stage 2 (out of 4). This means the students apparently did not believe they had the knowledge or ability to make clinical nursing judgments. In fact, the subjects in this research did not realize that they had a role in making clinical judgments. They did not even understand the term when asked what they thought about the idea. When asked to describe their

perceptions of thinking like a nurse, the new graduates were unable to respond to those words. They understood the concept of thinking like a nurse, but did not understand the idea of making clinical judgments. Maggie said, "You just have to go through the whole process (of thinking). It's not like the doctors tell what you have to do, there's a lot of time when you have to think through things and kind of tell the doctors what you need for your patient."

Because nursing students' conceptions and misconceptions regarding their role rarely are explored with them, the student comes to the clinical setting with a distinct disadvantage. Currently, nursing faculties appear to regard themselves as functioning with the highest epistemological level in which knowledge is context dependent and relative with experts as sources of knowledge in specific realms. In actuality, this does not appear to be true. Nursing educators themselves used lower epistemological perspectives of nursing knowledge than those they espoused for faculty members (Sweeney, 1996). That is, many of the faculty in the study tested at a low level of epistemological development, despite saying nursing educators used high levels of development. In addition, Sweeny (1996) purports that a lower level of epistemological development on the part of the majority of nursing faculties may perpetuate the current knowledge base of the profession by not encouraging divergent thinking in learners as well as those with advanced degrees. During the 1980s Valiga (1983) and Frisch (1987) demonstrated that many graduating nursing students have cognitive development positions too low for truly professional practice. In other words, they have not achieved the kind of epistemological development that allows them to think independently as they make life-affecting choices.

The new graduates did not do well on the case study for identifying problems nor did they do well on identifying interventions for the problems (Appendix M). May (1999) however, found just the opposite, in that she found that students were clinically competent. On the other hand, del Bueno (1990b) and Johannsson (1996) found that new graduates could not correctly identify the patient problem when asked to do so. At the last interview, Olivia said about the case study,

> Now I would think about the case study, and giving the medications. Before I would have no idea. Now I know what people give for what. Before, I would know what a med was but I wouldn't have that knowledge to think 'oh maybe they need to get this med right now.

So, the new graduate learned about the particular use of medications in the context of nursing.

Interpersonal changes

Relationship with 'the other' is another part of epistemological development. According to Baxter Magolda (1992) when these interpersonal changes happen, the individual is able to pay attention to the opinions of others but is not dependent on others to direct them or make decisions for them. That is the individual can listen to others, but is not dependent on others to give detailed directions for thinking. In the first part of this research, 'the other' was an individual or individuals to who the student looked to as an authority in the field. Initially the other was exclusively the preceptor. This was the person upon whom she depended and used to help her 'think like a nurse'. With time and experience, the other changed to include other experienced nurses and later other colleagues and peers. As confidence grows and the new graduate encounters more and different experience, which contribute to a greater understanding of the whole, the new graduate begins to trust herself. White (2003) identified building relationships with staff

as important in learning to think like a nurse. Gradually, the new graduate became able to collaborate with experienced nurses other than the preceptor and eventually was able to make her own decisions or validate her decisions with colleague. According to Katey,

> I can also see that when I don't know what to do, I will know to ask somebody else. If I don't trust my decision making skills, if I'm not skilled enough, I do ask another nurse, that I know who has experience and I would ask them what they would do.

Intrapersonal changes

Some of the intrapersonal changes that happened with these subjects are the developing confidence, acceptance of responsibility, and awareness of the importance of thinking critically.

The importance of confidence was identified by Haffer & Raingruber, (1998) and White (2003) as one thing that helps new nurses learn to think like a nurse. As the student gained confidence, she also began to gain comfort in herself as nurse and began to believe in her ability to function as a nurse. She learned how to do many of the skills expected of a nurse, she learned that she could be flexible, prioritize, and reprioritize components of nursing care within a minutes notice. She trusted herself to be able to delegate tasks appropriately. Luann said, "I can also see that when I don't know what to do, I will know to ask somebody else. If I don't trust my decision making skills, if I'm not skilled enough, I do ask another nurse."

Responsibility is the knowledge that one is accountable for ones thinking, decision, actions, and thinking critically. The new graduate recognized that taking responsibility appropriately is a significant part of being a nurse. They comprehended this significance without accomplishing it while they were students. Consequently, it was difficult for the new graduate to cope with the responsibility of a nurse when beginning

practice. As students, the new graduates were never entirely responsible for the patient's care. Therefore, as new graduates, they found that the responsibility to be much greater than anticipated (King, Smith, & Glenn, 2003) found that nurses and nurse administrators in acute health care agencies rated "assume responsibility as very important part of being a nurse. According to Katey,

> I thought it was more the doctors' responsibility; a lot of it is nursing responsibility. Almost more so sometimes, because we are the ones that decide what happens, when a patient changes in status, we are the ones to decide whether to call the doctor. If we do not call the doctor then it is our fault if something is wrong. So that is our responsibility to know that when we are assessing we catch what is changing or what's different.

This new trust in herself may lead to the ability of the new nurse graduate to think critically. Thorough and exact evaluations are characteristics of thinking critically. The process of thinking like a nurse is never the same. In fact, according to (Frauman, 1999) it is a very inexact science. Thinking critically often occurs in situations that are at a point of imminent change. The conclusions reached by using this type of thinking may be to continue in the same manner or change the approach to the problem entirely. Thinking critically is multifaceted including gathering, evaluating and putting disparate pieced of data together to identify a problem and determination of the appropriate approach to the problem. Learning to think critically about ones' work is a large part of nursing. It occurs continuously, expand with experience, takes place independently as well as collaboratively with other nurses and/or other health team members in concurrence with physician orders and eventually becomes second nature (King et al., 2003). White (2003) identified that the new graduate does not think critically about work and that the ability to think critically was not demonstrated in the early days of nursing practice. As with the

other components of development, incorporation of thinking critically into their modus operandi was a function of time.

Implications for theory and research

Like in all professions, identity development takes time, especially in the context of the profession (Gawande, 2002; Ofri, 2003). Because new nurse graduates did not understand the amount of thinking, the kinds of decisions, and the numbers of decisions they would have to make there are a number of epistemological implications for nursing.

The difficulty making clinical judgments indicates nurse educators must recognize the importance of helping students see the responsibility of making decisions and the dissonance it may cause. In addition, the feelings and dissonance that happen with challenges to one's level of development can be understood and listened to in order to help the individual continue the process of development in the profession. That is when students are pressed to consider different ways of thinking, nurse educators need to recognize behaviors that indicate students are having difficulty moving from one level of epistemological development to another. Nursing faculty need to help students understand they have to be able to make decisions and construct their knowledge while in the clinical setting.

In order to make clinical judgments or 'think like a nurse,' the individual needs to have higher levels of epistemological development. In addition, in fact, higher levels of epistemological development allow the nurse to reach expert levels of nursing according to Daley (2001).

Practice implications

How students learn to make clinical nursing judgments is not clearly understood (Bowles, 2000; Grealish, 2000), so this study, potentially, adds information to the knowledge base regarding how students or new graduates learn to think like a nurse. The data indicate that the learner comes to the situation with an idea of nursing which often is unrealistic. Therefore, it behooves nursing faculty to know the learners' viewpoints of nursing and to help the student construct a more realistic picture of nursing. Peters (2000) says it is important to remember that students come with ideas, and that they need to reshape those ideas. From the beginning, students need to learn responsibility for their own learning, develop confidence in their clinical abilities, and learn to think critically about and during the clinical experiences.

Many nurse educators fail to emphasize the importance and supremacy of the interdependence of medicine and nursing; that is there is a not clear demarcation between which things in health care belong to the doctor and which to the nurse. Because the new graduates do not understand this, they did not do well on the case study. Reese said, "I was thinking of basic nursing interventions and not necessarily meds to give. Medications are a doctor intervention." At the beginning of their experience as a nurse, the new graduates were not able to see that nurses have to make many judgments about doctor orders and that in turn doctors rely heavily on nurses for assessments and identification of developing problems. The new graduates did not have an overall picture of nursing because faculties may not help them see the overall picture of the situation. This should be an expected outcome of nursing education.

It is clear that one of the most time consuming learning strategies faculty require is not helpful for students. Sue said, "I think writing the care plans just the amount they

wanted us to write out and the amount of time we spent on them, I think that was a little ridiculous." Nurse educators require extensive written paper work and care plans to validate the learning that may have been accomplished during each clinical experience. In addition, the students report that the writing exercise is a mindless activity. Nurse educators do not seem to recognize that writing does not facilitate learning and should reevaluate this learning strategy (Tanner, 2000).

Despite the fact that students believe clinical experiences are the best for learning to think like a nurse, the new nurse graduates did not want to expand clinical hours or believe it could actually be accomplished. Nursing educators need to think carefully about clinical experience to determine what activities help student learn to think like a nurse. New graduates think that faculties need to carefully evaluate assigned activities during clinical experiences. Assignments in the clinical areas should be realistic in terms of the content of the assignment, duration of the assignment, closeness of each clinical assignment to the next and constancy with patients. In addition, the specific activities the student carries out needs to be evaluated for best learning. In other words, how many times does a student need to bathe a patient or change a bed? Are there other activities that the student could do rather than those?

Because expanding clinical time does not seem to be an option, the new graduates think the time in the classroom and lab can be utilized in way that help them learn to think like a nurse. They want more experiences with problem solving, prioritizing, and delegating. They want to practice skills in the lab, so that if they do not have the opportunity to perform certain skills in the clinical setting, at least they will have done it in the lab. They can get the information they need from textbooks. They want to

be able to apply and work with the information in order to enhance their ability to think like a nurse and believe that can happen in the classroom and the laboratory.

New graduates believe faculty members are their role models, and want faculty to ask them questions and challenge them to think like a nurse. This mutual construction of knowledge, according to students, is one of the best learning strategies they experienced. The students think that when nurse educators have high expectations of students, students feel challenged to learn. Listening to students is helpful for learning to think like a nurse (Fitzpatrick, 2001; Myrick & Yonge, 2002).

Clinical education of nursing students

Nurse educators would benefit from learning about epistemological development and some of the learning strategies that enhance moving from one epistemological level to another (McGovern & Valiga, 1997). They need to know the characteristics of different levels of epistemological development and the strategies that enhance development. It needs to be recognized that moving along the epistemological continuum develops slowly but incrementally and that moving from one epistemological development level to another is a difficult experience for students (Baxter Magolda, 1999). Epistemological development emerges best with care and support while holding high expectations of students (Baxter Magolda, 2002, January-February).

If nurse educators understand the difficulty students have in moving along the epistemological developmental continuum, they will be better able to support the student in the feelings or frustration and anger that may be evoked when the student is pressed to think in different ways. The educator must be aware of how difficult it is to challenge beliefs and values. They need to figure out how the student learns confidence,

responsibility, thinking critically, and what clinical experiences are the most helpful for learning to think like a nurse and then apply them across the curriculum.

Nurse educators need to be available for clarification and verification of students/new graduates' thought processes but begin to allow the student the opportunities to think a situation through while in the situation. From the beginning of the education process, independence surrounded by support and encouragement needs to be the modus operandi of faculty and preceptors.

Furthermore, nurse educators need to work cohesively to develop curricula based upon sound learning principles, which benefits students rather than clinging to 'sacred cows' or individual 'turf'. Curriculum development benefits from professional collaboration when epistemological development is understood.

Additionally, the new graduate should continue to accept responsibility for her learning and progress. The student needs to be encouraged to believe that they are in charge of their own learning and that they have the ability to reach goals, with faculty facilitating that learning. Throughout the educational process, the expectation should be that the learning process is never complete.

There is an apparent disconnect between what is expected of the new nurse graduate in the work setting and the expectations faculty have of nursing students. The learning strategies nursing faculty use may not focus on learning responsibility but rather on teaching thus never helping the student learn responsibility (Schaefer & Zygmont, 2003). Nursing curricula needs to be congruent with the clinical setting and clinical setting chosen for learning should correlate with areas in which most students choose to work as graduates.

In-service education

In- service educators need to assist the learner to develop or construct knowledge rather than gain knowledge. The educators in clinical settings can also learn the importance of helping individuals enhance and construct their own knowledge. The way new information is presented needs to be evaluated. Learners need to have hands on experience with the knowledge. This is more helpful than 'hoping the knowledge sinks in' by the instructor lecturing.

Collegiality needs to be developed and fostered between teaching institutions and clinical facilities rather than maintaining and 'us vs. you' mentality, which often exist currently. This will enhance the collaboration between work and educational settings that could enhance the learning opportunities for students.

Schedules for new nurse graduates should be developed in which experienced nurses are assigned to the same shift and on the same unit as the new graduate rather than assigning the new graduate alone to a shift where few support systems are available. This may require a modification in mindset of hiring institution where the 'bottom line' is primary. Ultimately, the above plan may be more cost effective in that changeover is staff is less.

Limitations

All research studies are prone to mistakes or misinterpretation. It is true of this study as well. Possible sources of misinterpretation for this study included situational contaminants such as the quality of the interviewer's interaction with the subjects. A nurse conducted the interviews. Nurses, generally, are nurturing and by the quality of their attending may be in a unique position to affect the quality of the interaction. The

interviewer's interaction with the subjects may have been directed toward decreasing anxiety and promoting collection of data rather than maintaining objectivity. Therefore, the manner in which the items were presented may limit the findings.

Transitory personal factors such as fatigue, hunger, or mood state of the new graduates may have limited full discussion of the questions. The comparatively small convenience sample size is another study limitation. The study needs to be replicated with a larger sample to validate the findings of this study.

Refinement of the statements used to glean information from new graduates is indicated. Use of these statements with a larger population of new graduates may lead to clearer information and better opportunity to ascertain how new graduates learn to think like a nurse. Upon further collaboration with subjects, information may be generated regarding curriculum development and learning strategies that will attenuate and/or prevent feelings of inadequacy.

Conclusions

With changes in words from clinical judgments to 'think like a nurse', the new nurse graduates were able to describe their perceptions about thinking like a nurse. They believed that immersion in the clinical experiences was the best way to learn to think like a nurse. However, they had a minimal amount of confidence in their ability to think like a nurse. In addition, they were overwhelmed with the responsibility the nurse has to accept. The need to engage in continual thinking critically was unexpected. The new graduates did appreciate the learning and discussions they had with faculty and peers while they were in school. Along with clinical experiences, these were the best strategies to learn to

think like a nurse. Epistemological development is one of the best ways to enhance the new nurse ability to achieve the ability to 'think like a nurse'.

Appendix A

Graduate Nurse Recruiting Handout

Hi, I am Sharon Etheridge. I am a nurse and a doctoral student at Michigan State University and I am working on my dissertation. I am studying the perceptions of new nursing graduates about clinical nursing judgments and learning to make clinical nursing judgments. I want to know what you think about clinical nursing judgments and how you learned to make them.

I would like to interview and observe at least six new nursing graduates. They must have a BSN degree, have passed NCLEX, have participated in a nurse intern program after graduation, and are no longer working with a preceptor on a medical surgical unit.

Please tell the nurse educator that you are willing to discuss the study with me, please call, or email me to indicate your beginning interest in this study. This is not consent to participate, but indicates a beginning interest in the study.

Sharon Etheridge
(616) 245-2507
save43@attbi.com

Appendix B

Recruiting Speech for Graduates

Hi, I am Sharon Etheridge. I am a nurse and a doctoral student at Michigan State University and I am working on my dissertation. I am studying the perceptions of new nursing graduates about clinical nursing judgments and learning to make clinical nursing judgments. I want to know what new graduates think about clinical nursing judgments and learning to make those clinical nursing judgments.

I would like you to participate in my study. I hope to find out what new nursing graduates think about clinical nursing judgments. I hope this information will be used to enhance the education of nursing students.

The benefit to you will be the opportunity to talk about making clinical nursing judgments and that often enhances your ability to make clinical nursing judgments. In addition, you may identify, in your performance evaluation that you have participated in research.

I need to interview and observe at least six new nursing graduates. They must have a BSN degree, have passed NCLEX, be between 22 and 29 years of age, have participated in a nurse intern program after graduation, and no longer working with a preceptor, and be employed on a medical -surgical unit.

Several activities will be requested of you for this research.

1. I would like you to read a case study and identify the clinical nursing judgments in the case study as well as interventions for the judgments and rationale for those interventions.

2. I will be interviewing you and audio taping the interviews on three different occasions. I would like to do this soon and in 3 and 6 months. In addition, I would like to observe you working in the clinical setting, following each interview.

Both the interview and the observations will be done where you work and at a mutually agreed upon time. The interviews will not be during working hours.

If you have questions, you may contact me

Sharon Etheridge
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Appendix C

Consent form for Graduates

In signing this document, you are giving consent to be interviewed by Sharon Etheridge about your insights regarding learning to make clinical judgments. In addition, she will observe you while you deliver nursing care in the clinical setting.

You understand that the interview will occur at the hospital in which you are employed and will be audio taped. You and Sharon Etheridge will mutually agree upon the time for the completing the case study, audio taped interviews and the observations. The three audio taped interviews and observations will occur at approximately one, 3 and 5 months after you start work as a RN. Each interview will take approximately 30- 45 minutes and will be audio taped. The observations will occur while you are working and will last about an hour. You may or may not be asked questions during the observations. In addition, the researcher may contact you at several other times to validate her understanding of the data, with you.

You are volunteering to participate in this research.

This permission is granted freely. You have been informed that the completing the case study, interviews, and observations are voluntary, and that even after the case study, interviews, and observations begin you can refuse to answer any specific questions or decide to terminate the case study, interviews, or observations at any point. You have been told that your answers to questions will not be given to anyone else and no reports of this study will ever identify you in any way. You have also been informed that your participation or refusal to participate will have no effect on your employment at the hospital.

This study will help develop a better understanding of the perceptions of nursing graduates about their experiences learning to make clinical judgments. However, you will receive no direct benefit because of participation.

Your privacy will be protected and in no way will anyone be able to identify your responses. Your privacy will be protected to the maximum extent allowable by law. The information you disclose will not be shared in any way with your employer.

If during the observations, you believe I am interfering in your thinking, you must tell me that you cannot talk to me or that you do not want to be observed because what you are doing for clients and what you are doing present a conflict of interest.

You understand that the results of this research will be given to you if you ask for them. Sharon Etheridge is the person to contact if you have any questions about the study. Sharon Etheridge can be reached by a collect call at (616) 245.2507 or email to save43@attbi.com.

If you have questions or concerns regarding your right as a study participant or are dissatisfied at any time with any aspect of this study, you may contact anonymously, if you wish—Ashir Kumar, M.D., Chair of the University Committee on Research Involving Human Subject (UCRIHS) by phone: (517) 355-2180, fax (517) 432-4503, e-mail: ucrihs@msu.edu, or regular mail: 202 Olds Hall, East Lansing, MI 48824.

Ashir Kumar, MD, Chair
Chair, University Committee on Research Involving Human Subjects
(517) 355-2180

I voluntarily agree to participate in this study.

_____ Date
Respondent signature

_____Date
Interviewer signature

Appendix D

Recruiting Speech for Preceptors

Hi, I am Sharon Etheridge. I am a nurse and a doctoral student at Michigan State University and I am working on my dissertation. I am studying the perceptions of new nursing graduates about clinical nursing judgments and learning to make clinical nursing judgments. I want to know what they think about how they learned and what they believe about clinical nursing judgments.

I would like you to participate in my study. I hope to find out your expectations of new graduates, so that I am able to see and hear with those expectations in mind while I interview and observe the new nursing graduates. I hope this information will be used to enhance the education of nursing students.

The benefit to you will be that you may identify, in your evaluation that you have participated in research.

I would like to interview six experienced preceptors of new nursing graduates.

I will be interviewing you and audiotaping the interview. I would like to do this soon. The interview will be done where you work and at a mutually agreed upon time.

If you have questions, you may contact me

Sharon Etheridge
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Grand Rapids, MI 49508
(616) 245 2507
save43@attbi.com

Appendix E

Consent Form for the Preceptors

In signing this document, you are giving your consent to be interviewed by Sharon Etheridge about your insights regarding expectations preceptors have for new nursing graduates.

You understand that the audiotaped interview will occur at the hospital in which you are employed. You and Sharon Etheridge will mutually agree upon the time for the interview. The interview will occur before her gathering data from new nursing graduates. The interview will take approximately 30- 45 minutes. In addition, the researcher may contact you at several other times to validate her understanding of the data you shared.

You are volunteering to participate in this research.

This permission is granted freely. You have been informed that the interview is voluntary, and that even after the interview begins you can refuse to answer any specific questions or decide to terminate the interview at any point. You have been told that your answers to questions will not be given to anyone else and no reports of this study will ever identify you in any way. You have also been informed that your participation or refusal to participate will have no effect on your employment at the hospital.

This study will help develop a better understanding of the perceptions of nursing graduates about their experiences learning to make clinical judgments. However, you will receive no direct benefit because of participation.

Your privacy will be protected to the maximum extent allowable by law and in no way will anyone be able to identify your responses.

You understand that the results of this research will be given to you if you ask for them. Sharon Etheridge is the person to contact if you have any questions about the study. Sharon Etheridge can be reached by a collect call at (616) 245.2507 or email to save43@attbi.com.

If you have questions or concerns regarding your right as a study participant or are dissatisfied at any time with any aspect of this study, you may contact anonymously, if you wish—Ashir Kumar, M.D., Chair of the University Committee on Research Involving Human Subject (UCRIHS) by phone: (517) 355-2180, fax (517) 432-4503, e-mail: ucrihs@msu.edu, or regular mail: 202 Olds Hall, East Lansing, MI 48824.

Ashir Kumar, MD, Chair
Chair, University Committee on Research Involving Human Subjects
(517) 355-2180

I voluntarily agree to participate in this study.

_____

Respondent signature Date

_____

Interviewer signature Date

Appendix F

Interview with Preceptors

Introductions
Introduction to study
Informed consent

1. As a preceptor, what are your expectations of new nursing graduates?

2. Tell me about your expectations about new graduates' ability to make clinical nursing judgments.

3. What is the range of ability to meet those expectations?

4. What are the biggest problems new nursing graduates have when first beginning to make clinical nursing judgments?

Appendix G

Protocol for Written Case Study

Read the case study and make comments about it as you think aloud to identify the problems or nursing diagnoses that you identify in this case study. Write those problems/NDX on this paper and include the interventions you would use for the problems. Include rationale or a reason for each intervention. Keep talking as you write.

Clinical nursing judgments/ Problems/ Nursing Diagnoses
- Interventions
- Rationale for interventions

Appendix H

Written Case study
By S. Fredette, RN EdD

Mrs. Jones is a fifty nine year old housewife who lives in Fitchburg in a one family two-story home with her husband. Mrs. Jones has had five prior admissions to the local hospital for bronchial asthma. Precipitating factors in these attacks include upper respiratory inforec5ion (twice), her youngest son leaving for college, her husband's hospitalization for a myocardial infarction six years ago and one admission w\for which the is no documentation regarding onset.

Mrs. Jones' parents are deceased; her father of COPD four years ago her mother of hypertension complicated by congestive heart failure ten years ago. She has two siblings, both brothers' age 53 and 62. The sixty two year old brother has had several hospitalizations for alcohol related problems. The 52 year old is healthy

Mr. Jones is employed as a press tender in a local paper mill. Six years ago, he had a myocardial infarction and recovered without complications. His work schedule has been reduced because of less work available at the mill. He now works three days a week and plans to retire next year at the age of 62. The Jones' have two children, both married, who live in distant states, one in North Carolina and on in Colorado. The children and their families visit home during the summer.

Mrs. Jones has never been employed outside of the home. She finished two years of high school leaving to marry. Besides taking care of the home, she has a flower and vegetable garden during the summer. Additionally, she knits, watches television, and visits her next-door neighbor with who she is friendly. On weekends, she and her husband go to a movie or an occasional auction. Mrs. Jones does not drink alcohol and gave up smoking five years ago.

On admission, at 1 AM, Mrs. Jones weighed 163 lbs., height 5'3". She looked anxious, holding onto her husband's hand and sitting upright. Her respiratory rate was 60, rales were heard at the base of both lungs, and she was cyanotic. Heart rate was 112, B.P. 160/102, and T. 99.2. She had audible wheezing and keeps saying, "I can't breathe." Her chest x-ray revealed under ventilation but no other abnormalities. Hydrocortisone IVP was given in the emergency room and Mrs. Jones was admitted for continuing assessment.

It is now the next morning and you are the primary nurse taking care of Mrs. Jones. Her respiratory rate is now 36 and she has wheezing and rales on auscultation. She says she feels better but her breathing is "still not right." She is in high fowlers position with oxygen by nasal cannula at 2L/ minute. Her heart rate is 92 and regular, B.P. 150/94 and T. 99. Doctor's orders include:
O2 @ 2L continuously
1500-calorie diet

Chest x-ray in the morning
Proventil inhaler 2 puffs q 4 h
Azmacort inhaler 2 puffs daily
Hydrocortisone 20 mgm IVP q 6 h
5% D5W IV @ 100cc/ hour

Mrs. Jones states she has not felt well for the last few days. She has notice some shortness of breath when climbing stairs in her house over the last two years but states that it has increased in the last 4-5 days. Her fatigue level has also increased. She noticed that she had to rest more during her garden work this summer.

She states that she eats well, "too well," and likes to cook. Since her husband's heart attack, she has eliminated butter in her cooking and tries to limit their intake of red meat, although she says it is difficult. Mrs. Jones says her husband does not like sweets but she does, so she makes them and shares some with her neighbor.

What are the priority problems for Mrs. Jones?
What will your interventions be and why?

Appendix I

New Nurse Graduate Semi structured interview # 1

1. Demographic data
   - Name
   - Age
   - School
   - Did you have any previous college education?
   - Did you study abroad?
   - Have you had any previous nursing experience? If so, what was it?

2. Did you pass NCLEX the first time you took it?

3. Describe how the actuality of nursing differs from your expectations of it.

4. Describe your thoughts about nursing clinical judgments.

5. Describe the most effective learning experiences you had about making clinical nursing judgments.

6. Describe the least effective learning experiences you had as a student learning to make clinical nursing judgments.

7. Describe your clinical experiences as a student.

8. Describe the interactions you had with other health care providers.

9. Describe how you were graded in clinical.

10. I am a nurse educator, what would you like to tell me about improving nursing education.

Appendix J

New Nurse Graduate Semi structured interview # 2

1. Validate understandings from interview # 1

2. Tell me about the importance of nursing faculty in your education.

3. Tell me about some clinical decisions you have made recently.

Appendix K

New Nurse Graduate Semi structured interview # 3

1. Validate understandings from interview # 2

2. Expand on questions raised in interview # 2

3. Talk about the case study.

3. Describe your thought about thinking like a nurse.

4. Describe the most effective learning experiences you had about making clinical nursing judgments.

5. Describe the least effective learning experiences you had as a student learning to make clinical nursing judgments.

Appendix L

Demographics of new nurse graduates

Subjects	1	2	3	4	5	6
Age	24	23	22	22	22	26
School	1	1	2	2	2	1
NCLEX	y	y	y	y	y	y
Study abroad	y	y	n	y	n	n
Prior nurse experience	y	y	y	y	y	n
Previous college education	y	n	n	n	n	y

Appendix M

Highest Priority problem/Nursing Diagnosis identified by the new nurse graduates using the case study

New Grad	Problem/NDX	Intervention	Rationale
One	Stress/anxiety	Discuss with pt Assess cause Allow for reflection	Reduce anxiety to allow for improved breathing to decrease BP and HR
Two	Anxiety	Reassurance	May help to decrease anxiety that measure are being taken to achieve optimal recovery for her
Three	Ineffective breathing pattern	C & DB 10x/hr Triflo 10x/hr On oxygen @2L Oxygen sat checks	Help clear her lungs & decrease RR while breathing deeper
Four	Impaired gas exchange	Assess pt lung sounds Check oxygen saturation levels	May be getting worse May not be adequately oxygenated
Five	Ineffective airway clearance	Encourage pt to cough and Deep breathe. Use incentive spirometer	To improve ventilation
Six	Knowledge deficient R/T asthma COPD	Educate	Better management of disease with knowledge of facts and ways to enhance living

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